

REMARKS

Claims 1-29 remain pending in this application. Claims 1, 10, 14, 17, 21, 28 and 29 are independent. Claims 1, 10, 14, 16, 17, 21, 25, 28, and 29 have been amended, no claims have been added or canceled by this Amendment.

No new matter is involved with any claim amendment, as support may be found in the originally-filed disclosure.

Administrative Deficiency of the Final Office Action

As a threshold matter, Applicants note that dependent claim 20 has been rejected in the Final Office Action as both as being anticipated by Li et al. and as being unpatentable over the combination of Li et al. with Holt et al., discussed further below.

Given the lack of detail by the Examiner with respect to identifying and addressing specifically where, in the applied art, disclosure of specific limitations may be found for each of the pending claims, Applicants are unable to determine, with certainty, the exact nature of the rejection of dependent claim 20. For example, the anticipation rejection of claims 1, 14, 20-21, 24, and 28-29 are generally narrative, and appear to only address limitations found in method claim 1, without specific reference otherwise to a specific claim or limitation within any of the other claim(s) subject to this rejection.

Applicants respectfully request removal or clarification of the rejections in the next communication in this matter, with specific reference being made to each limitation of each claim, by claim number, so that the record will be clear with respect to future allowance and/or appeal of the pending claims over the applied art.

Anticipation Rejection by Li et al.

Withdrawal of the rejection of claims 1, 14, 20-21, 24, and 28-29 under 35 U.S.C. §102(e) as being anticipated by Li et al. ("Li") (US 6,535,507) is requested. The administrative deficiencies of this rejection have been discussed above.

Applicants note that anticipation requires the disclosure, in a prior art reference, of each and every limitation as set forth in the claims.¹ There must be no difference between the claimed invention and reference disclosure for an anticipation rejection under 35 U.S.C. §102.² To properly anticipate a claim, the reference must teach every element of the claim.³ “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference”.⁴ “The identical invention must be shown in as complete detail as is contained in the ...claim.”⁵ In determining anticipation, no claim limitation may be ignored.⁶ In view of the foregoing authority, the cited reference fails to anticipate independent claim 1, as amended.

Discussion of Applicants' Disclosure

By way of background, one or more embodiments and aspects of Applicants' disclosure are directed to a method, system, and gateway support node in which selection of a gateway support node in a packet-switched network is controlled, for example, in a mobile communication network.

The present disclosure is based at least in part on the idea that the gateway support node suggests another, more suitable, gateway support node with which a tunnel should be established to the serving support node. The gateway support node may make the suggestion either when it rejects the request for establishing a tunnel, or when the conditions change so that it is practical to remove the existing tunnel. The operator can thereby distribute the load dynamically to the gateway support nodes in the network and transfer the tunnel between the SGSN and the gateway support node to another gateway support node depending on the conditions, *e.g.* in connection with handover of serving support nodes.

In one embodiment, the messages which are sent to the serving support node and indicate the most suitable gateway support node are messages in response to a ‘Create PDP Context’ request. In this embodiment, it is quite simple to implement by adding one parameter/attribute to

¹ *Titanium Metals Corp. v. Banner*, 227 USPQ 773 (Fed. Cir. 1985).

² *Scripps Clinic and Research Foundation v. Genentech, Inc.*, 18 USPQ2d 1001 (Fed. Cir. 1991).

³ See MPEP § 2131.

⁴ *Verdegaal Bros. v. Union Oil Co. of Calif.*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

⁵ *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

⁶ *Pac-Tex, Inc. v. Amerace Corp.*, 14 USPQ2d 187 (Fed. Cir. 1990).

an existing message. This enables gradual introduction of the feature into a network, and thus, both older support nodes lacking the inventive functionality, and new support nodes with improved functionality of Applicants' disclosure can be used simultaneously in the network, without interfering with its function.

In another embodiment, where the end of an existing tunnel is to be transferred from one gateway support node to another, the tunnel may be removed in the gateway support node only in response to a positive acknowledgement. Therefore, packets are not lost if there has not been time to establish a tunnel between the other gateway support node and the serving support node. This embodiment thereby ensures satisfactory transmission of packets.

Discussion of Li

According to the Abstract, Li is purportedly directed to a method of address resolution for the transfer of synchronous transfer mode calls through multiple domains in a broadband data network through multiple domains in a broadband data network. Li alleges that the implementation of broadband data networks as transport backbones for voice and voice data calls requires address resolution to determine the destination node for each call. Because of the projected frequency at which new access peripherals will be added to such broadband data networks, Li asserts that manual maintenance of translation tables is impractical.

Li appears to provide an automated method for address resolution which permits voice interface control units associated with the broadband data network nodes to automatically maintain the required translation tables, and further that next-hop resolution routing tables may be maintained at every node or only at nodes designated as signaling gateways between broadband data network domains. If the broadband data network is an ATM network, switched virtual circuits are set up in reverse from ATM destination nodes in order to reduce call admission and setup time. Li alleges that he provides an advantage in automated maintenance of translation tables which may be tailored to meet the operating policy of network managers that control respective domains.

Li teaches how to conserve memory required for next-hop resolution routing tables. Li teaches that gateway switches need only save a next-hop address for any DN that is not served within that gateway's domain. Li at col. 1:30 to col. 12:9 teaches how a routing path, including

both S-A4, and S-B1, is established and stored. ***Li does not provide any disclosure, teaching, or suggestion that, instead of S-A4, S-B1 could be used.***

On the contrary, ***Li teaches that both should be used***, thereby failing to teach, as variously and similarly recited, defining at least one condition for a first gateway support node, so that when the condition is fulfilled, a second gateway support node is more suitable for transmitting packets over a connection, wherein the second gateway support node is an alternative to the first gateway support node so that the packets are transmitted from a subscriber; detecting, by the first gateway node, that the condition is fulfilled; and instructing, by the first gateway node, to select the second gateway support node by sending a first message indicating the second gateway support node.

Further, by teaching that when a dialed number is not served by S-A4, the packet should be forwarded to the S-B1, Li teaches that, in order for the packet to reach its destination, it should be forwarded to a next ATM node in the path. However, ***that particular teaching fails to disclose, teach, suggest, or hint that S-A4 is less suitable for transmitting the packet towards the destination.***

As stated above, Li teaches that both S-A4 and S-B1 are used for transmitting the packet, and that they are in the same delivery path of a message. Thus, ***Li fails to teach that the second gateway support node is an alternative for the first gateway support node.***

Further, the dialed number "DN" in Li relates to the called station, *i.e.*, to the receiver. Therefore ***Li fails to disclose a condition that does not relate to a receiver of a packet.***

Based on the above, at least claims 1, 28, and 29 are patentable over Li.

With respect to claims 14 and 21, Li further teaches that S-A4 forwards the packet to S-B1, which fails to disclose not transmitting the packets to the other gateway. Thus, claims 14 and 21 are patentable over Li.

Specific Deficiencies of the Applied Art

The applied art does not disclose a method that includes, *inter alia*, "defining at least one condition for a first gateway support node, so that ***when the condition is fulfilled, a second gateway support node is more suitable for transmitting packets over a connection, the second gateway support node being an alternative to the first gateway support node so that the packets are transmitted from a subscriber either via the first gateway support node or via the second gateway support node, the condition not relating to a receiver of a packet***...instructing, by the first gateway node, ***to select the second gateway support node by sending a first message indicating the second gateway support node***", as recited in independent claim 1, as amended (*emphasis added*).

Further, the applied art does not disclose, *inter alia*, "a gateway support node of a packet network arranged to transmit, ***in response to fulfilment of a predefined condition, a first message indicating another gateway support node which is more suitable for transmitting packets, the predefined condition not relating to a receiver of a packet, wherein the gateway support node is configured not to transmits received packets to the other gateway support node but to transmit the received packets towards their destination address***", as recited in independent claim 14, as amended (*emphasis added*).

Still further, the applied art does not disclose a gateway support node of a packet network that includes, *inter alia*, "a processor configured to transmit, ***in response to fulfilment of a predefined condition, a first message indicating another gateway support node which is more suitable for transmitting packets, the predefined condition not relating to a receiver of a packet, wherein the gateway support node is configured not to transmits received packets to the other gateway support node but to transmit the received packets towards their destination address***", as recited in independent claim 21, as amended (*emphasis added*).

In addition, the applied art does not disclose a processor configured to, *inter alia*, "detect, that a condition is fulfilled, ***the condition being defined for a first gateway support node and not relating to a receiver of a packet, so that when the condition is fulfilled, a second gateway support node is more suitable for transmitting packets than the first gateway node selected for transmitting packets, and to instruct, in response to the condition being fulfilled, to select,***

instead of the first gateway node, the second gateway support node by sending a first message indicating the second gateway support node", as recited in independent claim 28, as amended (*emphasis* added).

Finally, the applied art does not disclose a computer-readable medium having stored thereon a software routine that includes, *inter alia*, instructions for "detecting that a condition is fulfilled, the condition being defined with respect to a first gateway support node and not relating to a receiver of a packet, ***so that when the condition is fulfilled, a second gateway support node is determined to be more suitable for transmitting packets than the first gateway node selected for transmitting packets, and instructing to select, instead of the first gateway node, the second gateway support node by sending a first message indicating the second gateway support node"***, as recited in independent claim 29, as amended (*emphasis* added).

Accordingly, since the applied art does not teach or suggest all the claimed limitations, reconsideration and allowance of independent claims 1, 14, 21, and 28-29 are respectfully requested. In addition, dependent claims 2-9, 15-16, 20, and 22-24 variously and ultimately depend from allowable independent claims 1, 14, and 21, and are submitted as being allowable at least on that basis, without further recourse to the patentable features recited therein.

Unpatentability Rejection over Li in View of Holt et al.

Withdrawal of the rejection of claims 2-3, 5, 7-13, 15-19, 22-23, and 25-27 under 35 U.S.C. §103(a) as allegedly being unpatentable over Li in view of Holt et al. ("Holt") (US 6,070,192) is requested. The examiner has failed to make a *prima facie* case of unpatentability.

At the outset, Applicant notes that, to establish a *prima facie* case of obviousness, three basic criteria offer useful insights. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference must teach or suggest all the claim limitations.⁷ Further, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's

⁷ See MPEP §2143.

disclosure.⁸ The Supreme Court recently held that it is necessary, *inter alia*, for a court to look to interrelated teachings of multiple patents in order to determine whether there was an apparent reason to combine the known elements in the claimed. In this regard, the Court held “[t]o facilitate review, this analysis should be made explicit.”⁹ “[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”¹⁰

Discussion of Holt and Li in Combination

According to the Abstract, Holt is purportedly directed to control in a data access transport service wherein, in a Data Access Transport Service (DATS), Data Service Providers (DSPs) share dial-in access (*e.g.* analog modem or Integrated Services Digital Network (ISDN) access) resources from a common pool maintained by a Local Exchange Carrier (LEC) (or potentially a DSP). A system is disclosed wherein a Network Controller (NC) performs the role of DSP service partitioning, quota enforcement, and resource load balancing to ensure that a DATS provider can provide a high quality of service (availability, response time & consistent bandwidth) to subscribed DSPs and their end-users. The Network Controller assists in Internet Data call establishment and tear-down, with the ability to refuse calls when the associated DSP has exceeded its service quota. The Network Controller also assists in the routing of calls to one of the DSPs Network Gateways (or data routers), using a load balancing scheme that maintains a pre-defined relative load on given DSP Network Gateways. The Network Controller will also provide an implementation that supports Multilink Point-to-Point Protocol (MLP) and 56 kbps data calls for ISDN BRI access. Additionally, the Network Controller will perform such functions as statistics collection, and network element administrative control. The Network Controller can be positioned to provide similar service control functionality with higher speed access technologies such as Asymmetric Digital Subscriber Loop (ADSL) and high-speed cable modems.

As regards independent claim 10 and Li, reference is made to the arguments presented above with respect to independent claim 1. Since Li teaches how to implement call transmission over ATM networks, a combination of Li and Holt would result in a system in which the data

⁸ *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) and *See* MPEP §2143.

⁹ *KSR Int'l. Co. v. Teleflex Inc.*, 550 U.S. ____ (2007) (*see* p. 14).

¹⁰ *See Id.*, citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

network (7) would operate according to the teachings of Li, but configured to be controlled by the network controller (12) of Holt. In such a system, the network controller would use, as one criterion for selecting a first gateway node, an address of the packet receiver. However, such a combination fails to teach or suggest Applicants' claimed invention, as specifically discussed above.

Further, a combination of Li and Holt would teach that a gateway node does not send any instructions to a network access server with which the tunnel is to be established, according to Holt, but that the network controller sends instructions to the network access server, even though no tunnel is established between the network controller and the network access server.

Thus, a combination of Li and Holt clearly fails to teach that the first gateway support node is arranged to send to the serving support node a first message indicating the second gateway support node which is more suitable for transmitting packets, and that, in response to receiving the first message, the serving support node is arranged to activate establishment of a tunnel to be used in transmission of packets with the second gateway support node indicated, especially when the support node has already activated establishment of the tunnel with the first gateway support node. Thus, claim 10 is patentable over a combination of Li and Holt and, by analogy, independent claims 18 and 25 are submitted as being similarly patentable.

As regards claims 17 and 25, reference is made above to the fact that a combination of Li and Holt fails to teach that a support node receives, from a first gateway node, a message including an address of a second gateway support node, and any feature relating thereto.

Specific Deficiencies of the Combination of Li and Holt

Specifically, the applied art, either alone or in combination, does not teach or suggest a packet-switched telecommunications system that includes, *inter alia*, "...a first and a second gateway support node, wherein the support node is arranged to activate establishment of a tunnel, to be used for transmission of packets, originating from the subscriber, between the support node and the first gateway support node, in response to fulfilment of a predefined condition, the predefined condition not relating to a receiver of a packet, ***the first gateway support node is arranged to send to the serving support node a first message indicating the second gateway support node which is more suitable for transmitting packets, in response to receiving the first***

message, the serving support node is arranged to activate establishment of a tunnel to be used in transmission of packets with the second gateway support node indicated, and packets transmitted using the tunnel between the support node and the first gateway support node are not sent from the first gateway support node to the second gateway support node", as recited in independent claim 10, as amended (*emphasis* added).

In addition, the applied art, either alone or in combination, does not teach or suggest a support node arranged, *inter alia*, "***in response to an address of a second gateway support node included in a message received from the first gateway support node, to activate establishment of a tunnel to be used for transmitting packets with said second gateway support node"***", as recited in independent claim 17, as amended (*emphasis* added).

Finally, the applied art, either alone or in combination, does not teach or suggest a support node comprising a processor configured, *inter alia*, "***in response to an address of a second gateway support node included in a message received from a first gateway node, to activate establishment of a tunnel to be used for transmitting packets with said second gateway support node"***", as recited in independent claim 25, as amended (*emphasis* added).

With respect to dependent claims 2-9, 15-16, and 22-23, the applied art does not make up for the previously identified deficiencies of Li, as discussed above in connection with the anticipation rejection of independent claims 1, 14, and 21, from which these dependent claims variously and ultimately depend.

Accordingly, since the applied art does not teach or suggest all the claimed limitations, reconsideration and allowance of independent claims 10, 17, and 25 are respectfully requested. In addition, dependent claims 11-13, 18-19, and 26-27 variously and ultimately depend from these patentable independent claims, and are submitted as being allowable at least on that basis, without further recourse to the patentable features recited therein. Dependent claims 2-9, 15-16, and 22-23 are also submitted as being patentable in light of the distinguishing arguments made above with respect the anticipation rejection of independent claims 1, 14, and 21.

The Examiner's Suggested Combination is Improperly Based on Hindsight

Assuming, *arguendo*, that the applied art, either alone or in combination, teaches or suggests all the limitations recited in the independent claims (which it does *not*), a person with skill in the art would not have a rational reason to combine Li with Holt in the manner suggested by the Examiner, because ***these references in combination teach away from Applicants' invention*** as variously recited at least in independent claims 10, 17, and 25. Only through the use of improper hindsight analysis would these references be looked upon to derive Applicant's novel and non-obvious invention, as recited in claims 2-3, 5, 7-13, 15-19, 22-23, and 25-27.

Actually, as discussed above, Li teaches that S-A4 must be as suitable as S-B1 since they both belong to the same transmission path. Clearly, Li does not disclose, teach, or suggest that S-A4 should be skipped from the path. ***Thus, the Examiner's interpretation that S-B1 is more suitable, is based solely on impermissible hindsight.***

It is impermissible within the framework of 35 U.S.C. §103 to pick and choose from any one reference only so much of it as will support a given position to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one skilled in the art.¹¹ Further in this regard, As the Court of Customs and Patent Appeals, predecessor to the Federal Circuit, has held:

All relevant teachings of cited references must be considered in determining what they fairly teach to one having ordinary skill in the art. The relevant portions of a reference include not only those teachings which would suggest particular aspects of an invention to one having ordinary skill in the art, but also those teachings which would lead such a person away from the claimed invention.¹²

The rejections in the Official Action amount, in substance, to nothing more than hindsight reconstruction of Applicants' invention by relying on isolated teachings of the applied art, without considering the overall context within which those teachings are presented. Without benefit of Applicants' disclosure, a person having ordinary skill in the art would not know what portions of [Li and Holt] to consider, and what portions to disregard as irrelevant or

¹¹ *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*, 230 USPQ 416 (Fed. Cir. 1986).

¹² *In re Mercier*, 185 USPQ 774, 778 (CCPA 1975).

misleading.¹³ As previously discussed, Li fails to teach or suggest a solution wherein S-A4 should be skipped from the path..

Based on the above, claims 2-3, 5, 7-13, 15-19, 22-23, and 25-27 are submitted as being patentable over the suggested combination of Li and Holt.

Unpatentability Rejection over Li in View of Lager et al.

Withdrawal of the rejection of claims 4 and 6 under 35 U.S.C. §103(a) as allegedly being unpatentable over Li in view of Lager et al. ("Lager") (US 6,636,502) is requested. The Examiner has failed to make a *prima facie* case of unpatentability.

Discussion of Lager

According to the Abstract, Lager is purportedly directed to GPRS-subscriber selection of multiple internet service providers in which a switching device (PLMN-SW) in a mobile radio communication system (PLMN) which supports a GPRS-network allows connection of a terminal station (GPRS-MS) of the mobile radio communication network (PLMN) with one of a plurality of packet data communication networks (PDN1, PDN2, IN). The selection of the packet data communication network (PDN1, PDN2, IN) is based on the transmission of a specific network indication parameter (NIP) from the terminal station (GPRS-MS) of the mobile radio communication network (PLMN). The network indication parameter (NIP) is transmitted to a serving (GPRS) support node (SGSN) as a special parameter in a PDP context activation procedure. Thus, a large number of internet service providers (ISP1, ISP2, ISP3) can be connected to a GPRS-network.

Whether or not this is true, Lager fails to make up for the previously identified deficiencies of Li, discussed above with respect to the anticipation rejection of independent claim 1, from which claims 4 and 6 variously and ultimately depend.

¹³ *In re Wesslau*, 147 USPQ 391, 393 (CCPA 1965).

Specific Deficiencies of the Applied Art

Specifically, the applied art does not disclose a method that includes, *inter alia*, "defining at least one condition for a first gateway support node, so that ***when the condition is fulfilled, a second gateway support node is more suitable for transmitting packets over a connection, the second gateway support node being an alternative to the first gateway support node so that the packets are transmitted from a subscriber either via the first gateway support node or via the second gateway support node, the condition not relating to a receiver of a packet...*** instructing, by the first gateway node, ***to select the second gateway support node by sending a first message indicating the second gateway support node***", as recited in independent claim 1, as amended (*emphasis added*).

Accordingly, dependent claims 4 and 6 are allowable over the applied art.

Conclusion

All rejections having been addressed, Applicant submits that each of pending claims 1-29 in the present application is in immediate condition for allowance. An early indication of the same would be appreciated.

In the event the Examiner believes that an interview would be helpful in resolving any outstanding issues in this case, the Undersigned Attorney is available at the telephone number indicated below.

For any fees that are due, including fees for the RCE and extensions of time, please charge Deposit Account Number 03-3975 from which the Undersigned Attorney is authorized to draw. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

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Respectfully submitted,

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